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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,918	01/20/2005	Takahiro Maeda	10921.0271USWO	6181
23552	7590	04/20/2006	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			HA, NGUYEN T	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

RD

<b>Office Action Summary</b>	Application No. 10/521,918	Applicant(s) MAEDA, TAKAHIRO	
	Examiner Nguyen T. Ha	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) *   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) .<br>Paper No(s)/Mail Date <u>0105</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al (US 5,959,831).

Regarding claim 1, Maeda et al. disclose a capacitor element (figures 1-9) comprising an anode chip body (1) including:

- a porous sintered body formed by sintering valve metal powder having four side surfaces (column 3, lines 55-56 and 65), a first end surface and a second end surface which is opposite from the first end surface (figure 1);
- an anode wire (2) fixed to the first end surface;
- a dielectric film (not shown) formed on the metal powder of the anode chip body (column 4, lines 9-11);
- a solid electrolyte layer (not shown) formed on the dielectric film (column 4, lines 13-19); and
- a cathode side electrode film (not shown) formed on the anode chip body via the solid electrolyte film (column 4, lines 20-21);
- wherein at least two of four edges of the anode chip body at which the four side surfaces meet the second end surface are rounded or

chamfered, the two edges being parallel with each other (column 3, lines 65-67 and column 4, lines 1-4).

Maeda et al. lack the porous sintered body formed by sintering valve metal powder into a rectangular parallelepiped. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a porous sintered body formed by sintering valve metal powder into a rectangular parallelepiped, since the applicant does not solve a particular problem with this shape and more than mere change of form or shape is necessary for patentability. *Span-Deck Inc. v. Fab-Con, Inc.*, (CA 8, 1982) 215 USPQ 835.

Regarding claim 2, Maeda et al. disclose the number of edges of the solid electrolytic capacitor which are rounded or chamfered is two (figure 8).

Regarding claim 3, the method steps are necessitated by the device structure as it is disclosed by Maeda et al. comprising:

- preparing an anode chip body (1) including a porous sintered body formed by sintering valve metal powder, having four side surfaces (column 3, lines 55-56 and 65), a first end surface and a second end surface which is opposite from the first end surface (figure 1), and an anode wire (2) fixed to the first end surface, the anode chip body being so formed that at least two of four edges at which the four side surfaces meet the second end surface are chamfered or rounded, the two edges being parallel with each other (column 3, lines 65-67 and column 4, lines 1-4), forming a dielectric film (not shown) on the metal powder of the

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anode chip body (column 4, lines 9-11), forming a solid electrolyte layer (not shown) by immersing the anode chip body in an electrolyte solution with the anode wire oriented upward (column 4, lines 13-19), and , pulling the anode chip body from the solution followed by baking the anode chip body (column 4, lines 5-6 and 13-17); and forming a cathode side electrode film on a metal paste on the anode chip body via the solid electrolyte layer (column 4, lines 20-21).

Maeda et al. lack the porous sintered body formed by sintering valve metal powder into a rectangular parallelepiped. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a porous sintered body formed by sintering valve metal powder into a rectangular parallelepiped, since the applicant does not solve a particular problem with this shape and more than mere change of form or shape is necessary for patentability. *Span-Deck Inc. v. Fab-Con, Inc.*, (CA 8, 1982) 215 USPQ 835.

3. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsui et al (US 6,430,033) in view of Maeda et al. (US 5,959,831).

Regarding claim 4, Mitsui et al. disclose a solid electrolytic capacitor (figures 1-6) comprising:

- an anode lead terminal plate (11),
- a cathodes lead terminal plate (10), and
- a capacitor element (2) arranged between the anode lead terminal plate and the cathode lead terminal plate;

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- the capacitor element comprising an anode chip body (not shown) including a porous sintered body formed by sintering valve metal powder (column 5, lines 35-37);
- a dielectric film (5) formed on the metal powder of the anode chip body;
- a solid electrolyte layer (6) formed on the dielectric film; and
- a cathode side electrode film (9) formed on the anode chip body via the solid electrolyte film;
- the anode wire (3) of the capacitor element being fixed to the anode lead terminal plate, the cathode side electrode film (9) being electrically connected to the cathode lead terminal plate (10).

Mitsui et al. lack: the capacitor element comprising an anode chip body having a rectangular parallelepiped having four side surfaces, a first end surface and a second end surface which is opposite from the first end surface, and anode wire fixed to the first end surface; wherein at least two of four edges of the anode chip body at which the four side surfaces meet the second end surface are rounded or chamfered the two edges being parallel with each other.

Maeda et al. teach an anode body is polygonal (tetragonal or square) having four side surfaces (column 2, lines 30-32), and wherein at least two of four edges of the anode chip body at which the four side surfaces meet the second end surface are rounded or chamfered, the two edges being parallel with each other (column 3, lines 65-67 and column 4, lines 1-4).

Maeda et al. lack the porous sintered body formed by sintering valve metal powder into a rectangular parallelepiped. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a porous sintered body formed by sintering valve metal powder into a rectangular parallelepiped, since the applicant does not solve a particular problem with this shape and more than mere change of form or shape is necessary for patentability. *Span-Deck Inc. v. Fab-Con, Inc.*, (CA 8, 1982) 215 USPQ 835.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the anode chip body of Maeda et al. in Mitsui et al., in order to support a downwardly projecting anode wire.

Regarding claim 5, the teaching of Mitsui et al. in view of Maeda et al. includes the capacitor element is so arranged that at least two of the four side surfaces of the anode chip body extend in parallel or generally in parallel with obverse surfaces of the two lead terminal plates, the edges at which the two side surfaces meet the second end surface being rounded or chamfered (figure 1 of Mitsui and figure 1 of Maeda et al.).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T. Ha whose telephone number is 571-272-1974. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM.

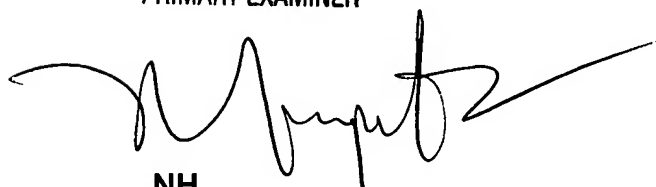
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext. 31. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NGUYEN T. HA  
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Nguyen T. Ha', with a long horizontal stroke extending to the right.

NH  
April 17, 2006